WHAT IS CLAIMED IS:

1. The zirconia sintered body comprising tetragonal zirconia, wherein a full width at half maximum at (111) plane of the tetragonal zirconia obtained by X-ray diffraction pattern measured under following conditions is from 0.38 to 4 degree.

Conditions:

Radiation Source: CuKα beam,

Voltage · Amplitude : 40 kV × 30 mA,

Monochromator: Graphite ,

Divergence Slit: 1.0 degree,

Scattering Slit: 1.0 degree,

Detector Slit: 0.3 degree,

Step Size: 0.2 degree,

Time/step: continuous,

Background Correction: made,

Scan Speed: 0.4 degree/minute.

2. The zirconia sintered body according to Claim 1, wherein the full width at half maximum at (111) plane of the tetragonal zirconia is from 0.4 to 2 degree.

3. The zirconia sintered body according to Claim 1 or 2, wherein the full width at half maximum at (111) plane of the tetragonal zirconia is 1 degree or less.

4. The zirconia sintered body according to Claim 1, wherein a ratio of the tetragonal zirconia in the zirconia

sintered body is 90 % by volume or more.

5. The zirconia sintered body according to Claim 1, wherein an average grain size of the zirconia sintered body is from 0.01 to 0.3 μm.

6. The zirconia sintered body according to Claim 1, wherein a density of the zirconia sintered body is 6 g/cm^3 or more.

7. The zirconia sintered body according to Claim 6, wherein the density of the zirconia sintered body is from 6 to 6.1 g/cm^3.

8. The zirconia sintered body according to Claim 1, wherein the zirconia sintered body contains a stabilizer.

9. The zirconia sintered body according to Claim 8, wherein the stabilizer is at least one selected from the group consisting of Y_2O_3, CeO_2, MgO, CaO, TiO_2, Yb_2O_3, Er_2O_3 and Ho_2O_3.

10. The zirconia sintered body according to Claim 1, wherein the zirconia sintered body contains Al_2O_3.

11. A method for producing the zirconia sintered body, wherein the method comprises steps of; molding zirconia powder having an average particle diameter of from 0.1 to 0.6 μm, a maximum particle diameter of 5 μm or less and a substantially polyhedral shape, and then sintering the molded green body under the temperature of from 1200 to 1400 °C.

12. The method according to Claim 11, wherein the zirconia powder contains monoclinic crystal.

13. The method according to Claim 12, wherein a ratio of the monoclinic crystal in the zirconia powder is 70 % by volume or more.